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| APPLICATION NO.                      | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/925,645                           | 08/10/2001  | Philip T. Hughes     | P 274260 DIV4-P7100 | 5435             |
| 909                                  | 7590        | 06/01/2005           | US/4                |                  |
| PILLSBURY WINTHROP SHAW PITTMAN, LLP |             |                      | EXAMINER            |                  |
| P.O. BOX 10500                       |             |                      | MURPHY, RHONDA L    |                  |
| MCLEAN, VA 22102                     |             |                      | ART UNIT            | PAPER NUMBER     |
|                                      |             |                      | 2667                |                  |

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                               |  |
|------------------------------|-------------------------------|-------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/925,645 | Applicant(s)<br>HUGHES ET AL. |  |
|                              | Examiner<br>Rhonda Murphy     | Art Unit<br>2667              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/22/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Double Patenting*

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-36 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-36 of prior U.S. Patent No. 6,553,020. This is a double patenting rejection.

**Regarding claim 1**, Hughes teaches communications system, the system comprising: a plurality of nodes, each node having: receiving means for receiving a signal transmitted by wireless transmitting means; transmitting means for wireless transmission of a signal; and, means for determining if a signal received by said node includes information for another node and causing a signal including said information to be transmitted by said transmitting means to another node if said received signal includes information for another node; each node having a substantially unidirectional point-to-point wireless transmission link with at least one other node such that each node can transmit a signal to at least one other node, at least some of the nodes having plural substantially unidirectional point-to-point wireless transmission links, each link between respective pairs of nodes being associated with a distinct time slot, the nodes being

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linked so as to form transmission path loops thereby to provide plural choices of path for the transmission of a signal between at least some of the nodes, each loop consisting of an even number of links (**US 6,553,020; claim 1**).

**Regarding claim 2**, Hughes teaches a system according to claim 1, wherein the allocation of time slots to the links can be varied such that a link may selectively be associated with more than one time slot (**US 6,553,020; claim 23**).

**Regarding claim 3**, Hughes teaches a system according to claim 1, wherein each node has a direct line-of-sight link with at least one other node such that each node can transmit a signal to another node in line-of-sight with said each node (**US 6,553,020; claim 21**).

**Regarding claim 4**, Hughes teaches a system according to claim 1, wherein each node comprises means for transmitting a signal including said information to another node if and only if a signal received at said node includes information for another node (**US 6,553,020; claim 22**).

**Regarding claim 5**, Hughes teaches a system according to claim 1, wherein each node is stationary (**US 6,553,020; claim 2**).

**Regarding claim 6**, Hughes teaches a system according to claim 1, wherein the number of nodes is less than the number of links (**US 6,553,020; claim 3**).

**Regarding claim 7**, Hughes teaches a system according to claim 1, wherein each node is arranged to be in a transmission mode for a time period which alternates with a time period for a reception mode (**US 6,553,020; claim 4**).

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**Regarding claim 8**, Hughes teaches a system according to claim 1, wherein at least one node is arranged not to transmit to any other node information in a signal received by said at least one node when that information is addressed to said at least one node (US 6,553,020; claim 24).

**Regarding claim 9**, Hughes teaches a system according to claim 8, wherein each node is arranged not to transmit to any other node information in a signal received by said at least one node when that information is addressed to said at least one node (US 6,553,020; claim 25).

**Regarding claim 10**, Hughes teaches a system according to claim 1, wherein each node has addressing means for adding to information in a received signal the address of a node to which a signal including said information is to be routed when said information is for another node (US 6,553,020; claim 5).

**Regarding claim 11**, Hughes teaches a system according to claim 10, wherein the addressing means includes means for determining the route of information through the system and adding an appropriate address to the information accordingly (US 6,553,020; claim 6).

**Regarding claim 12**, Hughes teaches a system according to claim 1, further comprising a central system controller for determining the route of information through the system (US 6,553,020; claim 7).

**Regarding claim 13**, Hughes teaches a system according to claim 1, wherein at least one node has means for determining if a received signal includes information for said at

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least one node and processing means for processing information in a signal addressed to said at least one node (**US 6,553,020; claim 8**).

**Regarding claim 14**, Hughes teaches a system according to claim 1, wherein the transmitting means of the nodes are arranged to transmit signals at frequencies greater than about 1 GHz (**US 6,553,020; claim 9**).

**Regarding claim 15**, Hughes teaches a system according to claim 1, wherein the link between two nodes is arranged to use simultaneously two or more frequency channels (**US 6,553,020; claim 10**).

**Regarding claim 16**, Hughes teaches a system according to claim 1, wherein said receiving and transmitting means are arranged to transmit and detect circularly polarized radiation (**US 6,553,020; claim 11**).

**Regarding claim 17**, Hughes teaches a system according to claim 1, wherein the transmitting means includes a highly directional transmitter antenna (**US 6,553,020; claim 12**).

**Regarding claim 18**, Hughes teaches a system according to claim 1, wherein the receiving means includes a highly directional receiver antenna (**US 6,553,020; claim 13**).

**Regarding claim 19**, Hughes teaches a system according to claim 1, wherein each node is substantially identical (**US 6,553,020; claim 14**).

**Regarding claim 20**, Hughes teaches a system according to claim 1, wherein the system is connected to a conventional trunk network for providing access to other networks (**US 6,553,020; claim 15**).

**Regarding claim 21**, Hughes teaches a system according to claim 20, comprising a further node connected by a data connection to one of the nodes of the system and arranged to transfer a signal to or receive a signal from the trunk network or both (**US 6,553,020; claim 16**).

**Regarding claim 22**, Hughes teaches a system according to claim 1, wherein a data storage server is connected to or provided at a node (**US 6,553,020; claim 17**).

**Regarding claim 23**, Hughes teaches a system according to claim 1, wherein at least one link of a node is arranged to use a first transmission frequency and at least one other link of said node is arranged to use a second transmission frequency (**US 6,553,020; claim 18**).

**Regarding claim 24**, Hughes teaches a system according to claim 1, wherein some of the nodes are allocated to subscribers and some of the nodes are not allocated to subscribers, at least some of said non-allocated nodes being solely for carrying information traffic between subscriber nodes (**US 6,553,020; claim 19**).

**Regarding claim 25**, Hughes teaches a method of communications, the method comprising the steps of: (A) transmitting a signal from one node to another node along a substantially unidirectional point-to-point wireless transmission link between said nodes; (B) receiving said signal at said other node; (C) determining in said other node if the signal received by said other node includes information for a further node and transmitting a signal including said information from said other node to a further node along a substantially unidirectional point-to-point wireless transmission link between said nodes if said signal includes information for a further node; and, (D) repeating

steps (A) to (C) until said signal reaches its destination node, wherein for each node that has plural links, each link to another node is associated with a distinct time slot, the nodes being linked so as to form transmission path loops thereby to provide plural choices of path for the transmission of a signal between at least some of the nodes, each loop consisting of an even number of links (**US 6,553,020; claim 26**).

**Regarding claim 26**, Hughes teaches a method according to claim 25, wherein each transmission step on a link of said one node occurs during a distinct time slot and each receiving step on a link of said other node occurs during a distinct time slot. (**US 6,553,020; claim 1**).

**Regarding claim 27**, Hughes teaches a method according to claim 26, comprising the step of varying the allocation of time slots to the links such that a link is selectively associated with more than one time slot (**US 6,553,020; claim 27**).

**Regarding claim 28**, Hughes teaches a method according to claim 25, wherein each node adds to information in a received signal the address of a node to which a signal including said information is to be routed when said information is for another node (**US 6,553,020; claim 29**).

**Regarding claim 29**, Hughes teaches a method according to claim 25, wherein each node has addressing means, the addressing means determining the route of the information through the system and adding an appropriate address to the information accordingly (**US 6,553,020; claim 30**).



**Regarding claim 30**, Hughes teaches a method according to claim 25, wherein a central system controller determines the route of information through the system (**US 6,553,020; claim 31**).

**Regarding claim 31**, Hughes teaches a method according to claim 25, comprising the step of each node transmitting a signal including said information to another node if and only if a signal received at said node includes information for another node (**US 6,553,020; claim 36**).

**Regarding claim 32**, Hughes teaches a method according to claim 25, including the steps of determining in at least one node if a received signal includes information for said at least one node and processing the information in a signal addressed to said at least one node (**US 6,553,020; claim 3**).

**Regarding claim 33**, Hughes teaches a method according to claim 25, wherein the signals are transmitted at frequencies greater than about 1 GHz (**US 6,553,020; claim 9**).

**Regarding claim 34**, Hughes teaches a method according to claim 25, wherein there are at least two possible paths for transfer of data between a source node and a destination node, and comprising the step of transmitting a copy of said data on each of said at least two paths (**US 6,553,020; claim 34**).

**Regarding claim 35**, Hughes teaches a method according to claim 25, wherein there are at least two possible paths for transfer of data between a source node and a destination node, and comprising the steps of transmitting from the source node a part

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only of said data on each of said at least two paths and reconstructing the data from said transmitted parts of said data in the destination node (**US 6,553,020; claim 35**).


**Regarding claim 36**, Hughes teaches a telecommunications switching device, comprising a communications system according to claim 1 (**US 6,553,020; claim 20**).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2667  
5/31/05

Rhonda Murphy  
Examiner  
Art Unit 2667

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